REMARKS

Claims 1-21 remain pending in the application. Claims 1, 11, 13, and 17-19 have been amended.

In the final rejection mailed March 29, 2006, the Examiner rejected claims 1-3, 5, 6, 10-15, and 17-19 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,658,572 ("Craig") in view of Mardirossian (of record). Claim 7 was rejected as obvious over Craig in view of Mardirossian and further in view of Murray et al. (of record). Claim 16 was rejected as obvious over Craig in view of Mardirossian and further in view of Nelson (of record). Claim 4 was rejected as obvious over Craig in view of Mardirossian and further in view of Manion (of record. Claims 8-9 were found to be allowable if rewritten into independent form and claims 20-21 were allowed.

Applicant acknowledges with appreciation the allowance of claims 20-21 and the allowability of claims 8-9. Applicant respectfully disagrees with the bases for the rejections and requests reconsideration and further examination of the claims.

Newly-cited Craig, U.S. Patent No. 6,658,572, is directed to an airline cockpit security system that utilizes a sensor for detecting whether or not one or more pilots are seated. Craig teaches that his system will activate only if the pilot is not seated. Thus, Craig does not prevent one of the seated flight crew from intentionally or unintentionally crashing the aircraft or from hijacking the aircraft. Moreover, Craig requires human intervention because it activates only when the pilot is moved out of the seat or by manually "pressing a high button" (see col. 14, lines 24-25). Furthermore, Craig does not prevent collisions with other objects, which he calls "non-hijacking emergencies such as impacts with birds, collisions with general aviation aircraft, and the like" (see column 2, lines 20-22).

Another important distinction between the present claimed invention and Craig is that Craig uses the existing on-board autopilot of the aircraft for "uninterruptible autonomous navigation 1190" when the inputs from the pilot flight controls and inputs to the autopilot are locked out. For example, the security system of Craig will either allow the aircraft to "continue on its originally programmed course or adopt a pre-stored, hijack-responsive flight plan that can be automatically loaded and executed by the uninterruptible autonomous navigator 1190." (See

column 10, lines 4-8.) Flight plans uploaded through the autonomous navigator 1190 are processed by the navigator "which loads it into the programmable autopilot (not shown) and then executes the new flight plan." (See column 12, lines 37-38.)

Nowhere does Craig teach or suggest disabling the on-board autopilot in addition to disabling the pilot-operated control system and taxi controls. Rather, Craig teaches disabling only the inputs to the flight controls and the autopilot.

In summary, the system of Craig does not monitor aircraft operations at all times, does not prevent collisions with general aviation aircraft, birds, and the like, and does not override or bypass the autopilot to control movement of the aircraft both on the ground and in the air.

Mardirossian, U.S. Patent No. 6,732,022, has been discussed in previous responses to office actions, and those responses are incorporated herein by reference. In summary, only "designated" structures are avoided, not all buildings (see column 1, line 27 and column 2, lines 5-30). In addition, Mardirossian does not activate until a time threshold has been reached (see column 2, lines 63-66). In addition, Mardirossian takes over from the pilot by using the autopilot (see column 3, lines 13-25).

Turning to the claims, claim 1 is directed to a system for protecting aircraft operation at all times while an aircraft is in service. As discussed above, neither Craig nor Mardirossian teach protecting an aircraft at all times while the aircraft is in service, which includes not only in the air, but also on the ground. Claim 1 recites an anti-crash system on the aircraft that automatically and without human intervention transmits commands to prevent the aircraft from crashing into the ground and into any objects on the ground and in the air. As discussed above, both Craig and Mardirossian allow for collisions with certain objects on the ground and in the air.

Claim 1 further recites an auto-controlling and piloting system on the aircraft that receives the commands from the anti-crash system and is configured to prevent control by the pilot-operated control system and the on-board autopilot, the auto-controlling and piloting system overriding the pilot-operated control system and the autopilot to control movement of the aircraft on the ground and in the air. Again, neither Craig nor Mardirossian taken alone or in any

combination thereof, teach or suggest overriding both the pilot-operated control system and the autopilot. In fact, both of these references specifically teach using the autopilot. Neither of these references teach an auto-controlling and piloting system that controls movement of the aircraft on the ground and in the air without using the pilot-operated control system and the on-board autopilot.

Claim 1 in addition recites a monitoring device system that monitors aircraft operation at all times while the aircraft is in service, the monitoring device system communicating with the anti-crash system. Neither Craig nor Mardirossian, taken alone or in any combination thereof, teach or suggest monitoring aircraft operation at all times, *i.e.*, on the ground and in the air, which means while the aircraft is in service.

Claim 1 also recites a secondary aircraft controller system on-board the aircraft and coupled to the auto-controlling land piloting system for controlling the aircraft flight and taxis controls independent of the pilot-operated controls and the on-board autopilot. There is absolutely no teaching or suggestion in Craig or Mardirossian, taken alone or in any combination thereof, of a secondary aircraft controller system. Applicant notes that the Examiner has not pointed to any such secondary aircraft controller system in either Craig or Mardirossian.

In view of the foregoing, applicant respectfully submits that claim 1 is clearly allowable.

Claims 2-10 all depend ultimately from claim 1. These claims are allowable for the features recited therein as well as for the features recited in claim 1.

Independent claim 11 is directed to an aircraft protection system for use at all times while an aircraft is in service that includes an on-board monitoring system configured to monitor the aircraft at all times while the aircraft is in service and to transmit communication signals, an anti-crash control system coupled to the monitoring system and responsive to the communication signals to automatically and without human intervention transmit commands to prevent the aircraft from crashing into any object, an auto-controlling and piloting system on-board the aircraft that receives the commands from the anti-crash system and prevents control of the aircraft by the control system and the on-board autopilot, the auto-controlling and piloting system overriding the autopilot to control movement of the aircraft on the ground and in the air, a

secondary aircraft controller system on-board the aircraft to control the aircraft flight and taxi controls in response to the auto-controlling and piloting system, and an authorities security aircraft flight equipment computer remote from the aircraft that communicates with the anti-crash system, the auto-controlling and piloting system, and the monitoring system. Claim 11 includes many of the features discussed above with respect to claim 1 and is allowable for those reasons alone. In addition, claim 1 includes the authorities security aircraft flight equipment computer that is a ground-based unit to alert those on the ground of a potential crash into a building. It overrides human control and will manipulate all aircraft that is on a collision course. There is a total lack of human control and intervention in this system.

For the above reasons, applicant respectfully submits that claim 11 and dependent claim 12 are clearly allowable.

Independent claim 13 is directed to an aircraft flight management system that comprises an aircraft control and communication module configured to be coupled to an aircraft control system that is secondary to existing aircraft electronic flight controls and electronic engine controls. Claim 13 recites the module including an anti-crash system that is operated at all times while the aircraft is in service to detect impending crashes with any object and sends an electronic command signal to an auto-controlling and piloting system to automatically override aircraft autopilot and flight and engine control commands without any human intervention, and configured to prevent control by an authorized ground-based remote control and by an on-board autopilot at all times while the aircraft is in service.

Because Craig requires human intervention before its system is activated, *i.e.*, the movement of the pilot out of the seat, and because Craig and Mardirossian clearly rely upon the existing autopilot and do not override the aircraft autopilot and flight and engine control commands, applicant respectfully submits that for these reasons as well as for the reasons discussed above with respect to claim 1 in which the common features have been noted, applicant respectfully submits that claim 13, as well as dependent claims 14-16, are clearly allowable.

Claim 17 is directed to an aircraft flight management system including an aircraft control and communication module that is secondary to existing aircraft electronic flight controls

that includes an anti-crash system that is operational at all times while the aircraft is in service to detect impending crashes with objects and to send an electronic command signal to an auto-controlling and piloting system. Claim 17 recites that this system is adapted to receive electronic communication signals automatically generated from sensors in the aircraft and from ground-based and air-based facilities without any flight crew or other human intervention in the air or on the ground to override aircraft autopilot and flight and engine control commands from a cockpit of the aircraft to prevent control by the on-board autopilot and to avoid collisions with the earth and other objects at all times while the aircraft is in service. Applicant respectfully submits that claim 17 is allowable for the reasons discussed above with respect to those elements in common with claims 13, 11, and 1. More particularly, nowhere do Craig nor Mardirossian, taken alone or in any combination thereof teach or suggest an aircraft flight management system that operates without any human intervention at all times while the aircraft is in service to override autopilot and flight and engine control commands to prevent control by the on-board autopilot and to avoid collisions with the earth and other objects at all times while the aircraft is in service.

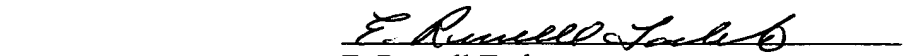
Claims 18 and 19 are also directed to aircraft flight management systems that monitor the operation of the aircraft at all times while the aircraft is in service to prevent control by an on-board autopilot at all times while the system is receiving control signals to prevent collisions with objects in the air and on the ground. Both of these claims specifically recite that the system operates without any human intervention. As discussed above, Craig specifically requires movement of the pilot to activate its system. Mardirossian and Craig both utilize the existing autopilot, and both systems permit collisions with other objects. In view of the foregoing, applicant respectfully submits that claims 18 and 19 are also allowable.

In view of the foregoing, applicant respectfully submits all of the claims in this application are now clearly in condition for allowance. In the event the Examiner disagrees, applicant respectfully requests a telephonic interview with the Examiner. Consequently, early

and favorable action allowing these claims and passing this case to issuance is respectfully solicited.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC



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